## Abstract

A system for combustion and removal of residual carbon within fly ash particles in which the fly ash particles are fed into an array of process units for combustion. The fly ash particles are subjected to heat and motive air such that as the fly ash particles pass through the particulate bed, they are heated to a sufficient temperature to cause the combustion of the residual carbon within the particles. The fly ash particles thereafter are conveyed in a dilute phase for further combustion through the reactor chamber away from the particulate bed and exhausted to an ash capture. The fly ash is then separated from the exhaust air that conveys the ash in its dilute phase with the air being further exhausted and the captured fly ash particles being fed to a feed accumulator for re-injection to the reactor chamber or discharge for further processing.